

AN ANALYSIS OF THE INFLATION FACTOR
USED TO INCREASE FUNDING UNDER
THE EDUCATION FINANCE ACT

OFFICE OF ECONOMIC RESEARCH
DIVISION OF RESEARCH AND STATISTICS

JULY 19, 1990

WILLIAM C. GILLESPIE, Ph. D.

SUMMARY FOR THE COMMITTEE

This study is the latest of several undertaken by the Division of Research and Statistics (DRSS) to evaluate the Education Finance Act inflation factor. In January 1990, the Committee to Study Formula Funding requested that the DRSS examine the EFA factor to determine if it continues to provide the school districts enough money to buy the 1975-1976 EFA model district, and to examine why funding under the EFA has not been adequate to keep up with increases in teacher salaries in the Southeast.

According to the results of this study, the most recent level of the Base Student Cost at \$1,419 per pupil for FY 89-90 was sufficient to keep up with the cost of living and education wages nationwide. Education salaries in South Carolina, however, rose eight percent more than the cost of living through FY 88-89. An additional \$162 per pupil would have to be added to the Base Student Cost if the State wanted the EFA formula to pay for the increase in education salaries above the cost of living.

Although the Base Student Cost was less than that needed to cover rising education salaries in South Carolina, the State paid enough to cover the extra costs by using funds from the Education Improvement Act Fund. The EIA Fund was not designated to be used for basic education programs, but funds from the EIA were used to supplement salaries in light of the EIA requirement that

the average of teacher salaries in South Carolina match increases in the southeastern average teacher salary. The state allocated \$153 million from the EIA Fund specifically to cover salary increases for principals, teachers, and special teachers hired for the basic skills and gifted and talented programs. These funds would have added \$163 per pupil to the Base Student Cost if they were allocated under the EFA formula, without any need for local matching funds. The extra \$163 per pupil was equal to that needed to pay the full cost of the model based on salaries in FY 88-89.

A large part of the \$162 per pupil increase in actual costs over the cost of living was caused by improvements in skills and experience of the education staff in South Carolina and the Southeast. The study estimated the cost of improving teacher skills at \$57 per pupil. This upgrading was generally in line with skill improvements of education staff in the Southeast and productivity increases that have taken place in the private sector of the state. The study estimated that another \$57 per pupil of the increase was caused by the upgrading of non-teacher skills which was not a specific requirement of the EIA. The balance of the gap, \$48 per pupil, can be attributable to education salaries in South Carolina becoming more competitive with other industries.

The EFA inflation factor, plus the special salary supplements

from the EIA Fund, were ample to bring teacher salaries in South Carolina up to the southeastern average teacher salary. The study found that the average of salaries of all employees in primary and secondary education, not just teachers, were five percent higher in South Carolina than in the Southeast, according to data provided by the states' Employment and Security Commissions. In light of this finding, the study concluded that the EFA factor, plus the special EIA supplements, have been adequate to bring the average of education salaries in South Carolina up to the average in the Southeast.

As for changes to the formula, at the minimum the Division recommends revising the EFA factor to exclude fringe benefits and to base future salary increases on education wages in the Southeast, as opposed to the current use of compensation of state and local government employees nationwide. The inflation factor was designed to cover only cost increases that would be necessary to maintain the original model, not those costs incurred to meet the southeastern average and to improve the quality and competitiveness of the staff in the model. This methodology would do that and keep model salaries abreast of any future upgradings of salaries, excluding fringe benefits, in the Southeast.

This means that the Base Student Cost plus the EIA salary supplement will be enough to maintain the salaries of education employees in the model at the southeastern average, provided that

the EIA salary supplements match the revised EFA inflation factor. Because the gap between the EFA factor of \$1,419 and the model cost of \$1,581 based on FY 88-89 salaries was the result of skill and competitive improvements, and not inflation, the DRSS does not recommend including the EIA special salary supplements in the inflation factor. Also, because of the limited experience that the Division has had with salary data from the states' Employment Security Commissions and the possibility of differences in the types of education jobs, the DRSS does not recommend any adjustments to the inflation factor because the average of all education wages in South Carolina exceeded the southeastern average for all education workers.

Nonetheless, the Committee may wish to consider some adjustment to the EFA factor to pay for the increase in teacher skills needed to match increases in the Southeast. Although the DRSS does not consider the improvement in teacher skills a factor that is specifically related to inflation, clearly increasing teacher skills to keep up with productivity increases in the private sector of the state is one of the objectives of education funding. A one-time increase in the Base Student Cost of \$57 per pupil would be needed if the Committee decided that keeping teacher skills in line with productivity increases in the Southeast and private sector of the state is an appropriate goal of the EFA factor. Future inflationary adjustments would be based on the adjusted figure. Another \$57 per pupil would be needed to cover

increases in non-teacher skills, if the Committee decided that the upgrade of non-teachers should also be paid under the EFA formula. Another \$48 per pupil would be needed if the Committee decided that all of the increase in salaries should be paid under the EFA formula.

TABLE OF CONTENTS

	Page

Executive Summary	2
Purpose of Study	8
EFA Inflation Factor Methodology	8
EFA Inflation Factor Compared to Cost Of Living	11
EFA Inflation Factor Compared to U.S. Education Wages	12
EFA Inflation Factor Compared to S.C. Wages	14
Upgrade of Teacher Skills and Experience	15
Non-salary Component of EFA	19
Cost of Model Based on Average FY 88-89 Salaries	20
Southeast and South Carolina Education Wages	23
Proposed Modification to Salary Portion of EFA	24
Self-Correction For Forecast Error	25
Use of Education Improvement Act Funds	26

PURPOSE OF STUDY

On January 23, 1990, the Division of Research and Statistics (DRSS) reported to the Special Committee to Study Formula Funding its findings from a review of the Education Finance Act inflation factor. The review indicated that DRSS had underforecasted the EFA factor, but this error was offset by escalating fringe benefits which were in the factor but not funded by the EFA formula. The Committee requested that OER undertake a more thorough study of the adequacy of the inflation factor for maintaining the EFA program and make recommendations for improvement, if appropriate. One of the leading concerns of the Committee was the appropriateness of the factor to reflect new trends in education costs, particularly in the Southeast, that have developed since the implementation of the EFA formula. The State Department of Education asked why the inflation factor was not enough to match salaries in the Southeast when the original model was based on southeastern education salaries.

EFA INFLATION FACTOR METHODOLOGY

Under the Education Finance Act, the State funds each school district based on its number of weighted pupil units and the Base Student Cost (BSC) per pupil. The State provides 70 percent of the funds and the districts the other 30 percent. Each district's share depends on its percentage of assessed property value in the

state, causing the richer districts to fund more per pupil than the poorer districts. The General Assembly set the BSC the first two years and directed DRSS to project an inflation factor beginning in FY 78-79 to set subsequent levels. For FY 88-89, the last year of actual data, the BSC was \$1,419 per pupil.

The initial level of Base Student Cost was determined by developing a staffing and support pattern for a model school district and estimating salaries for each position at amounts equivalent to their averages in the Southeast. The model was based on a school district with 7,620 weighted pupil units and 2,614 students in grades 4 through 8. Estimates for non-salary cost such as materials, supplies, and training were also included in the model. The model cost was estimated at \$665 per pupil for school year 1975-1976. A listing of the components and the cost per pupil for each component is shown below.

In developing the inflation methodology, the DRSS needed to choose a standard to serve as a guide for inflationary adjustments to the model costs. The Division chose the compensation deflator for state and local government employees nationwide as a proxy for the salary portion of the model, because it would provide enough funding for the local districts to compete for skilled staff in a broad labor market. The Division chose the deflator for purchases of goods by state and local governments to represent the non-salary portion of the model in order to keep in-

creases in the costs of materials and supplies for school districts in line with those same costs for other local government entities. By using these proxies, it was believed that funding would be enough for the school districts to buy the same staff, training, maintenance and overhead that was specified in the EFA model in 1975-1976. The compensation portion accounted for 88 percent and the purchases portion 12 percent. On the basis of data provided by the Department of Education, the percentages were revised to 87 and 13, respectively, in 1989.

Table 1. Base Student Cost Model: 1975-1976

Category	S.E. Average Salary	Number	\$ Cost Per Pupil
Principal	\$16,995	4.4	28.61
Asst. Principal	14,283	3.9	21.31
Secretary	6,117	4.4	10.30
Clerk	6,454	4.4	10.86
Librarians	12,807	4.4	21.56
Librarian Aids	6,117	3.9	9.13
Guidance Councilors	11,172	3.9	16.67
Teachers	10,469	100.6	402.90
Program Materials			7.00
Program Training			0.46
Superintendent	25,626	1.0	3.36
Asst. Superintendent	21,757	1.0	2.86
Finance Officer	19,197	1.0	2.52
Director	16,861	2.0	4.43
Consultants	13,032	8.0	13.68
Adm. Secretary	6,117	9.0	7.22
Adm. Supplies and Travel			8.51
Overhead			93.87
Total	10,680	151.4	665.25

Source: Model staffing and total costs from an unpublished report furnished to the Committee by the State DOE. Per pupil calculations by DRSS using model pupil count.

EFA INFLATION FACTOR COMPARED TO COST OF LIVING

The earlier study by the Office of Economic Research noted that the compensation factor included fringe benefits, which had risen dramatically since the base year. But fringe benefits were always funded separately from the EFA factor. As a result, the inclusion of fringe benefits in the factor resulted in an upward bias. On the other hand, the Office also noted that the compensation factor had been underforecasted, which caused a downward bias in the factor. From the results of that study, it was difficult to conclude with certainty whether or not the factor was enough to cover inflation.

As a basic test of the adequacy of the EFA inflation factor, in this study the DRSS compared the salary portion of the EFA factor to the most commonly used measure of inflation, the Consumer Price Index. The analysis showed that salaries in the EFA factor lagged the cost of living during the late 1970's and early 1980's, when the Iranian oil crisis caused an extraordinary rise in inflation, but caught up with the CPI in 1987-1988. In FY 88-89, the salary portion of the EFA factor fell to 99.5 percent of the model salary adjusted for the cost of living.

As the table below shows, in FY 87-88 the EFA salary stood at an estimated \$22,375, which was slightly above the \$22,373 needed to match the CPI. In FY 88-89, the EFA salary was \$23,260, which was

slightly less than the \$23,367 needed to match the CPI. This means that funding under the EFA in the two most recent years, for all practical purposes, was enough to give teachers, principals, superintendents, and others in the foundation program salary increases sufficient to offset rises in the cost of living since 1975-1976.

Table 2. EFA Model Salaries Compared to Cost of Living

Year	Salary Portion of EFA Factor	CPI Adjusted Salary	EFA Salary as % CPI Adj Sal.
75-76	\$10,680	\$10,680	100.0
76-77	11,326	11,336	99.9
77-78	12,008	12,137	98.9
78-79	12,673	13,295	95.3
79-80	13,539	14,954	90.5
80-81	14,590	16,719	87.3
81-82	15,771	18,080	87.2
82-83	16,952	18,919	89.6
83-84	17,929	19,633	91.3
84-85	18,981	20,405	93.0
85-86	20,143	20,955	96.1
86-87	21,249	21,534	98.6
87-88	22,375	22,373	100.0
88-89	23,260	23,367	99.5
89-90	24,459		

Source: DRSS. CPI adjusted equals the same increases as in the CPI. The salary portion of the actual EFA factor estimated using only the salary component of the factor, and allocating the forecast error proportionately.

EFA INFLATION FACTOR COMPARED TO U.S. EDUCATION WAGES

Even though the EFA factor was enough to match the cost of living amount, for all practical purposes, it does not mean that it was enough to buy the services included in the original model, be-

cause service costs in general might have risen more than the cost of living. To test whether or not the EFA factor was enough to keep funding up with cost increases generally in education, the DRSS compared the salary portion of the EFA factor to increases in education wages for the nation as a whole. As shown in the following table, the average model salary that the EFA factor actually supported rose from 92.0 percent of the U.S. average wage in education in FY 1975-1976 to 95.0 percent in 1987-1988, the latest year for information on U.S. education wages. This result indicates that the salary portion of the EFA factor rose more than national education wages and brought it closer to national average salaries in education than it was in 1975-1976.

Table 3. EFA Factor Compared to U.S. Education Wages

Year	EFA Salary	U.S. Ed. Wages	% of U.S. Wage
75-76	10,680	11,610	92.0
76-77	11,326	12,388	91.4
77-78	12,008	13,065	91.9
78-79	12,673	13,849	91.5
79-80	13,539	14,872	91.0
80-81	14,590	16,022	91.1
81-82	15,771	17,334	91.0
82-83	16,952	18,585	91.2
83-84	17,929	19,604	91.4
84-85	18,981	20,572	92.3
85-86	20,143	21,522	93.6
86-87	21,249	22,506	94.4
87-88	22,375	23,558	95.0
88-89	23,260		
89-90	24,459		

Source: U.S. Education wages from U.S. Dept of Commerce. EFA salary is average model salary funded by the EFA inflation factor.

EFA FACTOR COMPARED TO SOUTH CAROLINA WAGES

The DRSS also compared the EFA factor to wage increases for all employees in South Carolina to assess whether or not school districts would be able to compete just as well as in FY 1975-1976 in the overall labor market in the state. As the following table 4 demonstrates, the EFA factor has been escalated less than the increase in the average of wages in the state. In FY 1975-1976, the model salary was 135.4 percent of the average salary of all workers in the state. The percentage fell steadily until FY 1980-1981 and has since recovered to 129.5 percent, which was less than in FY 75-76. This means that staffing in the basic model was not funded enough to be able to keep wages of the staff in the model rising as much as wages for all employees in the state.

Table 4. EFA Factor Compared to South Carolina Wages

Year	EFA Salary	S.C. Average Wage	SC/EFA
75-76	10,680	7,887	135.4
76-77	11,326	8,543	132.6
77-78	12,008	9,235	130.0
78-79	12,672	10,035	126.3
79-80	13,539	10,958	123.6
80-81	14,590	12,006	121.5
81-82	15,771	12,948	121.8
82-83	16,952	13,749	123.3
83-84	17,929	14,492	123.7
84-85	18,981	15,138	125.4
85-86	20,143	15,793	127.5
86-87	21,249	16,458	129.1
87-88	22,375	17,153	130.4
88-89	23,260	17,955	129.5
89-90	24,459		

Source: SC wages from U.S. Dept. of Commerce

UPGRADE OF TEACHER SKILLS AND EXPERIENCE

The EFA inflation factor was designed to keep funding apace with increases in the prices of services and goods in the model and to cover only increases in skill and experience equivalent to those of state and local government employees nationwide. It was not designed to provide funding for dramatic increases in skills and experience. The problem with this methodology is that since 1975-1976, the school districts have improved the average skill and experience of the professional staff in the state considerably more than the improvement of the skills and experience of government employees nationwide.

To demonstrate, the number of professional staff that had Master's degrees rose from a little more than 10,000 in 1975-1976 to over 18,000 in 1987-1988. Those with Ph. D.'s rose from less than 600 to more than 3,500 over the same period. Meanwhile, those with only Bachelor's degrees declined from over 21,000 to less than 20,000. The number of professional staff with each kind of degree is shown in Table 5.

On a relative basis, the percentage of those with advanced degrees rose from approximately one-third of the total professional staff in 1975-1976 to over one-half of the professional staff. The following table shows the percentage of the professional staff with each kind of degree in the model year 1975-76 compared

Table 5. Degrees for Professional Staff

School Year	Bachelor's Degree	Master's Degree	Ph.D. Degree	Non Degree	Total Staff
75-76	21,460	10,276	582	576	32,894
76-77	20,331	11,436	716	542	33,025
77-78	20,475	12,679	976	505	34,635
78-79	20,045	13,616	1,107	415	35,183
79-80	20,522	14,812	1,353	1,039	37,726
80-81	20,439	15,365	1,623	1,014	38,441
81-82	19,898	15,771	1,834	1,017	38,520
82-83	19,255	16,187	2,020	1,006	38,468
83-84	18,768	16,536	2,244	1,028	38,576
84-85	19,688	17,181	2,519	1,020	40,408
85-86	19,976	17,541	2,871	1,006	41,394
86-87	19,781	17,964	3,184	949	41,878
87-88	19,485	18,142	3,604	986	42,217

Source: Rankings, S. C. Department Of Education

to the percentages in 1987-1988, the last year such data were available. As Table 6 indicates, there has been a dramatic shift to more advanced degrees.

Table 6. Percent of Professional Staff With Various Degrees
1975-1976 Compared to 1987-1988

	Bachelor's Degree	Master's Degree	Ph. D. Degree	Non Degree
75-76	65.2	31.2	1.8	1.8
87-88	46.2	43.0	8.5	2.3

The experience of the teaching staff was also upgraded from an average of 10.8 years in 1975-1976 to 12.3 years in 1988-1989, a 14 percent increase. Table 7 indicates the average level of experience in each year since the model year for the teaching

staff. Data on experience for the full professional staff were not available back to the model year.

Table 7. Average Years of Teacher Experience
1975-1976 to 1988-1989

Year	Years Experience
75-76	10.8
76-77	10.7
77-78	10.7
78-79	10.7
79-80	10.7
80-81	10.8
81-82	11.0
82-83	11.2
83-84	11.5
84-85	11.4
85-86	11.5
86-87	11.6
87-88	11.8
88-89	12.3

Source: Rankings, SC Dept. of Ed.

As the above tables illustrate, both the level of skills and experience of the professional staff and teachers have been increased dramatically since the model year, 1975-1976. Since school districts pay higher salaries to their teachers and other professional staff with advanced degrees and more experience, employee salary costs have risen similarly.

Although the upgrading of staff skills and experience was substantial in South Carolina, it appears from available data that the trend in this state matched a similar trend in the southeastern states. The DRSS surveyed the southeastern states to gather data

on the number of classroom teachers with advanced degrees. Half of the states had data back to 1975-1976 and all but two in 1987-1988. As shown in the table below, the percentages of teachers with advanced degrees in 1975-1976 ranged from a low of 25 percent in North Carolina and Mississippi to a high of 36 percent in Georgia, of the states that had data. South Carolina fell in between at 27 percent. In 1987-1988, the percentages of teachers with advanced degrees had increased significantly, ranging from a high in Kentucky of 77 percent to a low of 32 percent for North Carolina. South Carolina fell in the middle range at 48 percent. Even though the data are incomplete and sketchy, it does appear that the upgrading of skills has generally been substantial throughout all the southeastern states.

Table 8. Percentages of Teachers With Advance Degrees in Southeast

State	1975-1976	1987-1988
Alabama	n/a	55
Arkansas	n/a	n/a
Florida	n/a	41
Georgia	36	52
Kentucky	35	77
Louisiana	n/a	44
Mississippi	25	42
North Carolina	25	32
South Carolina	27	48
Tennessee	n/a	n/a
Virginia	n/a	40
West Virginia	30	50

Source: DRSS survey of southeastern states. Data on all professional staff, as shown in table 5, were not available in most states.

NON-SALARY COMPONENT OF EFA

Although the overwhelming portion of the EFA factor depends on salaries, there is a component for non-salary increases, equal to 13 percent of the overall factor. The non-salary portion of the EFA factor appears to have been amply funded, although it is difficult to evaluate this part because of the diverse nature of the goods purchased. To evaluate inflation in the costs of the non-salary portion of the base model, the DRSS compared the purchased goods proxy to the component of the CPI that covers non-durable commodities purchased by consumers. As the table below shows, the CPI component rose only slightly more than the EFA proxy, which would indicate that the non-salary portion of the EFA was funded just about as much as inflation in similar types of goods.

Table 9. Non-salary Components of EFA Inflation Factor

Year	EFA Non-Salary	CPI Commodity
-----	-----	-----
	(dollars per pupil)	
75-76	86	86
76-77	91	90
77-78	96	95
78-79	104	104
79-80	113	121
80-81	122	137
81-82	131	145
82-83	138	147
83-84	145	150
84-85	152	153
85-86	149	150
86-87	151	149
87-88	154	154
88-89	158	161

Source: DRSS. Non-durable commodity index from Bureau of Labor Statistics.

The table shows the dollars per pupil of the non-salary portion of the EFA factor compared to the dollars per pupil cost if prices of the commodities in the EFA factor had risen the same amount as commodities in the CPI. In FY 88-89, the EFA factor was only \$3 per pupil less than the CPI component.

COST OF MODEL BASED ON AVERAGE FY 88-89 SALARIES

To estimate the Base Student Cost that would be required to purchase the model at FY 88-89 actual salary levels, the DRSS compiled estimates of salaries for each of the positions in the model. The average salary of classroom teachers reported by the State Department of Education was \$25,239 for FY 88-89. This amount was used for teachers in the model. Salaries of principals and superintendents were estimated from the Annual Salary Study, Superintendents and Principals 1988-1989, SC Department of Education. Salaries of guidance counselors, librarians, consultants, finance officers, and directors were estimated from special studies published by the South Carolina Department of Education. Salaries for secretaries, clerks, and librarian aids were based on their levels in state government and were provided by the State Department of Human Resource Management. The model costs based on FY 88-89 salaries and other costs are shown in the following table. As shown, the Base Student Cost required to buy the same model in FY 88-89 would be an estimated \$1,581 per pupil.

Table 10. Base Student Costs Based on FY 88-89 Salaries

Category	FY 88-89 Salary	Number	\$ Cost per Pupil
Principal	\$43,082 1/	4.4	72.52
Asst. Principal	35,467 1/	3.9	52.92
Secretary	14,644 2/	4.4	24.65
Clerk	13,017 2/	4.4	21.91
Librarians	27,835 3/	4.4	46.85
Librarian Aids	13,017 2/	3.9	19.42
Guidance Counselors	30,097 3/	3.9	44.90
Teachers	25,239 4/	100.6	971.32
Program Materials	5/		15.33
Program Training	5/		1.01
Superintendent	60,311 1/	1.0	7.91
Asst. Superintendent	52,023 1/	1.0	6.83
Finance Officer	36,872 3/	1.0	4.84
Director	44,010 6/	2.0	11.55
Consultants	36,098 3/	8.0	37.90
Adm Secretary	14,644 4/	9.0	17.30
Adm Supplies & Travel			18.65
Overhead			205.57
Total			1,581.39

Source: 1. SC Department of Education, Annual Salary Study, Superintendents and Principals 1988-1989. 2. State Department of Human Resources for comparable position. 3. SC Department of Education, Supplemental Salary Study, Selected School, District, and County Personnel 1988-1989. 4. SC Department of Education, Office of Research. 5. Estimated based on Consumer Price Index. 6. Same source as No. 3 but for Director of Instruction and Director of Personnel only.

Table 11. Cost of Education Improvements

In order to measure the costs of the improvement in skills, experience and the competitive status of education, the DRSS compared today's actual average salaries to model salaries at approximately the same skill and experience level as in 1975-1976. For example, the average salary of classroom teachers was estimated for a mix of teachers with degrees and experience levels

the same as in FY 75-76. For teachers, the improvement in skill levels added an estimated \$1,329 per teacher to the average salary and the increase in years experience added an estimated \$773 per teacher. Estimates for improvements for other positions in the model are shown in the following table.

Table 12. Costs of Improvements in Skills and Experience
(Cost Per Employee)

Position	Advanced Degrees	Experience
Principal	\$2,269	\$1,373
Asst. Principal	1,868	1,373
Librarians	1,466	515
Guidance Counselors	1,585	1,373
Teachers	1,329	773
Superintendent	3,176	1,373
Asst. Superintendent	2,739	1,373
Finance Officer	1,942	515
Directors	2,317	1,373
Consultants	1,901	1,373

Source: Estimated by Office of Economic Research from salary schedules published by State Department of Education.

The increase in teacher skills and experience costs an estimated average of \$57 per pupil. Another estimated \$57 per pupil was added to upgrade the non-teaching professional staff in education, bringing the estimated incremental amount to upgrade all the staff to \$104 per pupil.

The balance of the \$162 per pupil gap between the EFA factor and the FY 88-89 model cost based on actual salaries, amounting to \$48 per pupil, served to enhance the competitive status of education relative to other professions.

Table 13. Costs of Education Improvements
(per pupil cost)

	Incremental Cost	Total Cost
Projected EFA Inflation Factor		1,419
Improved Teacher Skills & Experience	57	1,476
Upgrade Other Professional Staff	57	1,533
Improved Competitive Status	48	1,581

Source: DRSS estimates based on average salaries, skills and experience from SC Dept. Of Education.

SOUTHEAST AND SOUTH CAROLINA EDUCATION WAGES

As a general test of education funding overall in the state, DRSS compared wage increases in primary and secondary schools in South Carolina to those in the Southeast, as reported by the school districts to the Employment Security Commissions of the state's. Over the period 1984 through 1988, which were the only years that comparable data were available, the average of education wages in South Carolina rose more than the average in the Southeast. In 1984, the average in South Carolina was 98 percent of the Southeast and ranked eight among the twelve states, and in 1988 it was 105 percent that of the Southeast and ranked third. Clearly, over that five year period, actual funding by the districts for wages of all employees working in primary and secondary education was quite favorable compared to that in the Southeast.

Table 14. Average Wages in Primary and Secondary Education

Year	South Carolina	Southeast	% of S.E.
1984	14,359	14,707	98
1985	15,703	15,959	98
1986	17,351	16,935	102
1987	18,480	17,769	104
1988	19,479	18,587	105

Source: Employment and wages from Employment Security Commissions of the southeastern states as reported for the Workers' Compensation Program. The average salary computed by DRSS. Includes part-time employees.

The DRSS was not able to determine if there were differences in the make-up of the education workforce in the Southeast from that in South Carolina. There might have been a shift to lower paying jobs in the Southeast. In Florida, for example, there has been an enormous amount of hiring of new teachers at the entry level, which would tend to keep the average down.

PROPOSED MODIFICATION TO SALARY PORTION OF EFA

Using wages of employees in primary and secondary education in the Southeast as a proxy for wages in the model instead of compensation for state and local government employees nationwide would probably be an improvement. This approach would assure that the EFA model was funded in the future to keep up with education wages in the Southeast. It would preserve the same competitive posture of the model staff in future years in the Southeast as exists today. It would also eliminate the error caused by the inclusion of fringe benefits in the compensation proxy.

Using southeastern education wages is feasible. The Division has surveyed the southeastern states and found that data on wages and employment in primary and secondary schools are available from the state Employment and Security Commissions. These are reported quarterly with an approximate nine month lag, which is a little less than the lag in the current compensation deflator.

In making the projection of the factor, the Division would be able to incorporate the knowledge obtained from its survey of average salaries of classroom teachers, although the EFA factor covers all workers, and not just those in the classroom. Actual increases in the southeastern average wage in education are shown in the following table:

Table 15. Historical Changes in Southeastern Education Wages

Year	% Change
----	-----
1985	6.5
1986	6.1
1987	4.9
1988	4.6
-----	-----

Source: Wages from Employment Security
Commissions in the Southeast.

SELF-CORRECTION FOR FORECAST ERROR

Any forecast will be subject to some error. As DRSS pointed out in its 1988 study, the compensation factor was underforecasted for several years. The current method of forecasting the change

in the factor each year independently of other years has tended to compound errors. In the case of the southeastern average teacher salary, the average is estimated each year based on latest available data, which results in a correction for errors made in previous years. In any one year there could be an error, but for longer periods of time the salary portion of the factor would be kept even with wages in the Southeast. The result would be that the districts would be funded enough to keep the model staff in line with their peers in the Southeast.

Because there may be differences in staffing patterns in the Southeast from those in South Carolina that might justify a higher average wage, the DRSS does not believe that the information warrants a downward adjustment in the EFA factor to account for the higher education wages in South Carolina. The proposed revision would maintain average wages in South Carolina at five percent above the average in the Southeast.

USE OF EDUCATION IMPROVEMENT ACT FUNDS

According to the results of this study, the most recent level of the Base Student Cost was enough to keep up with the cost of living and education wages nationwide. It was not enough to keep up with wages in the private sector of the state, which have resulted in part from productivity improvements in many of the state's industries. Although skills and experience of the educa-

tion staff in the state have been upgraded considerably from those in the base model, it does not appear that those improvements were any more than for teachers in the Southeast and for employees in the private sector of the state. To match wage increases in the private sector for just teachers, the Base Student Cost would have to be increased \$57 per pupil, for a total State outlay of \$30 million. To bring the other professional staff in line with private wage increases, the Base Student Cost would have to be increased another \$57 per pupil, costing the State another \$30 million.

In practice, the school districts have increased wages more than wage increases in the private sector, which has enhanced the competitive position of education relative to other professions in the state. It would require another \$48 per pupil or \$25 million of state funds for the EFA to cover the enhanced competitiveness of education in the state.

Although the EIA fund was not intended to be used for basic education programs, the State has provided more than enough funds to the local districts from the Education Improvement Act fund for salary supplements to cover all of the salary increases in excess of the amounts provided by the EFA factor. The EIA did require that average teacher salaries in South Carolina match the southeastern average and in FY 88-89, the State allocated \$93 million from the EIA fund for teacher salaries, which amounted to

\$2,460 per teacher when spread over the 37,962 of eligible staff. Even though there was no requirement to match principal salaries in the Southeast, the State allocated approximately two million dollars for principal salaries, which when spread over the estimated 1,300 principals amounted to approximately \$1,500 per principal. The State also allocated roughly \$75 million for gifted and talented programs and basic skills programs, of which roughly \$60 million was used for salaries. All together, the State allocated approximately \$155 million of EIA funds for staff salaries.

These extra increases were not funded under the EFA sharing formula, which provides a greater than proportionate share of the funds to the poorer districts. But because the State funded the full amount of the increase and did not require matching funds from the local districts, and because most of the funds were specifically earmarked for salary increases, it does not appear necessary that the EFA sharing formula be used for these funds.